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MSFC-SPEC-548B
September 16, 1980
SUPERSEDING
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George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

SPECIFICATION
FOR
VACUUM BAKING OF ELECTRICAL CONNECTORS
FOR SPACELAB PAYLOADS

Prepared by:

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GEORGE C. MARSHALL SPACE FLIGHT CENTER
MARSHALL SPACE FLIGHT CENTER, ALABAMA 35812

SPECIFICATION FOR VACUUM BAKING OF ELECTRICAL CONNECTORS
FOR SPACELAB PAYLOADS

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1.0 SCOPE

- 1.1 This specification covers the requirements for vacuum baking of electrical connectors to control stress corrosion and outgassing of the materials used in the connectors. Connectors are required to meet MSFC-SPEC-522 and JSC-SP-R-002 for Spacelab payloads.

CAUTION: Only those connectors with specified temperatures equivalent to or greater than those in paragraph 3.1 of this specification should be subjected to the vacuum bake.

2.0 APPLICABLE DOCUMENTS

- 2.1 The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on the date of application shall apply.

GEORGE C. MARSHALL SPACE FLIGHT CENTER

MSFC-SPEC-522 Design Criteria for Controlling Stress Corrosion Cracking

LYNDON B. JOHNSON SPACE CENTER

SP-R-0022 General Specification, Vacuum Stability Requirement of Polymeric Material for Spacecraft Application

3.0. REQUIREMENTS

- 3.1 Vacuum Bake - The connectors shall be subjected to a vacuum bake cycle consisting of:

Temperature: 340°F +10°F, -15°F

Vacuum: 5 x 10⁻⁴ Torr or better

Time: 48 hours minimum; not to exceed 100 hours

- 3.2 Identification - Connectors which have been exposed to the vacuum bake as specified in 3.1 shall be identified by a mark which is clearly visible on each half of the connector. A symbol, H, shall be placed on each half of the connector in the vicinity of the part number identification. Vacuum baked connector accessories and separate pieces shall also be marked with the symbol H. These markings shall not obscure or confuse any information on the connectors such as part numbers or date codes. The ink used shall meet the outgassing requirements of JSC-SP-R-0022 and all other requirements for the Spacelab payloads.

- 3.3 Sealed Containers - The connectors shall be kept in their sealed containers (bags) at all times except while undergoing vacuum bake and inspection. The protective plastic caps shall be kept in place except during vacuum bake.
- 3.4 Handling - When removed from their sealed containers, the connectors should be kept in a clean area and only handled with lint free gloves.
- 4.0 QUALITY ASSURANCE
 - 4.1 Inspection - Visual inspections shall be performed before and after the vacuum bake.
- 5.0 SHIPPING
 - 5.1 The connectors shall be in sealed bags and individually packaged during transporting/shipping between MSFC and the user.

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